

AMENDMENTS TO THE SPECIFICATION

Page 4

Replace the paragraph commencing at line 11 with the following amended paragraph:

~~DISCLOSURE OF INVENTION~~SUMMARY OF THE INVENTION

Page 30

Replace the paragraph commencing at line 3 with the following amended paragraph:

~~BEST MODE FOR CARRYING OUT INVENTION~~DETAILED DESCRIPTION OF THE INVENTION

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Replace the paragraph commencing at line 7 with the following amended paragraph:

Referring first to Figures 1-3, there is illustrated a dehumidification unit Z_1 formed in accordance with a first embodiment of the present invention. ~~The dehumidification unit Z_1 is a result of the embodying of inventions as set forth in claim 1 and claim 4.~~ As shown in Figure 1, the dehumidification unit Z_1 is formed as follows: a plurality of adsorption elements 1, 1, ... and a plurality of cooling elements 2, 2, ... are laminated sequentially alternately in a 90-degree plane phase, thereby to form a laminated body. Then, two end plates 9, 9 are mounted on one lamination-wise end and on the other lamination-wise end of the laminated body, respectively. The end plates 9, 9 are connected together by four frame members 10, 10, ... which are arranged along the four corners of the laminated body, in other words all the components are combined into a single body, as shown in Figure 3. Hereinafter, specific constructions for each of the adsorption element 1 and the cooling element 2 which together constitute the dehumidification unit Z_1 will be described.

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Replace the paragraph commencing at line 16 with the following amended paragraph:

Referring to Figures 4 and 5, there is illustrated a dehumidification unit Z_2 formed in accordance with a second embodiment of the present invention. ~~The dehumidification unit Z_2 is a result of the embodying of inventions as set forth in claims 1 and 4.~~ The dehumidification unit Z_2 is configured basically the same as the dehumidification unit Z_1 of the first embodiment, with the exception of the way the cooling element 2 is constructed.

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Replace the paragraph commencing at line 1 with the following amended paragraph:

Referring to Figure 6, there is illustrated a dehumidification unit Z_3 formed in accordance with a third embodiment of the present invention. ~~The dehumidification unit Z_3 is a result of the embodying of inventions as set forth in claim 1 and claim 4.~~ The dehumidification unit Z_3 is configured basically the same as the dehumidification unit Z_1 of the first embodiment, with the exception of the way the adsorption element 1 and the cooling element 2 are constructed.

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Replace the paragraph commencing at line 1 with the following amended paragraph:

Referring to Figures 7-9, there is illustrated a dehumidification unit Z_4 formed in accordance with a fourth embodiment of the present invention. ~~The dehumidification unit Z_4 is a result of the embodying of an invention as set forth in claim 2.~~ The dehumidification unit Z_4 is formed as follows: a plurality of adsorption elements 1, 1, ... and a plurality of cooling elements 2, 2, ... are laminated sequentially alternately in a 90-degree plane phase, thereby to form a laminated body. Then, two end plates 9, 9 are mounted on one lamination-wise end and on the other lamination-wise end of the laminated body, respectively. The end plates 9, 9 are connected together by four frame members 10, 10, ... which are arranged along the four corners of the laminated body, in other words all the components are combined into a single body, as shown in Figure 9. Hereinafter, specific constructions for the adsorption element 1 and the cooling element 2 which together constitute the dehumidification unit Z_4 will be described.

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Replace the paragraph commencing at line 24 with the following amended paragraph:

Referring to Figures 10 and 11, there is illustrated a dehumidification unit Z_5 formed in accordance with a fifth embodiment of the present invention. ~~The dehumidification unit Z_5 is a result of the embodying of inventions as set forth in claim 1 and claim 3.~~ The dehumidification unit Z_5 is configured basically the same as the dehumidification unit Z_4 of the fourth embodiment, with the exception of the way the cooling element 2 is constructed.

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Replace the paragraph commencing at line 2 with the following amended paragraph:

Referring to Figures 12 and 13, there is illustrated a dehumidification unit Z_6 formed in accordance with a sixth embodiment of the present invention. ~~The dehumidification unit Z_6 is a result of the embodying of an invention as set forth in claim 2.~~ The dehumidification unit Z_6 is configured basically the same as the dehumidification unit Z_4 of the fourth embodiment, with the exception of the way the adsorption element 1 is constructed.

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Replace the paragraph commencing at line 24 with the following amended paragraph:

Referring to Figures 16-18, there is illustrated a dehumidification unit Z_8 formed in accordance with an eighth embodiment of the present invention. ~~The dehumidification unit Z_8 is a result of the embodying of an invention as set forth in claim 2.~~ The dehumidification unit Z_8 is configured basically the same as the dehumidification unit Z_6 of the sixth embodiment, with the exception of the way the cooling element 2 is constructed.

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Replace the paragraph commencing at line 2 with the following amended paragraph:

Referring to Figures 19 and 20, there is illustrated a dehumidification unit Z_9 formed in accordance with a ninth embodiment of the present invention. ~~The dehumidification unit Z_9 is a result of the embodying of inventions as set forth in claim 1 and claim 3.~~ The dehumidification unit Z_9 is configured basically the same as the dehumidification unit Z_8 of the eighth embodiment, with the exception of the way the cooling element 2 is constructed.

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Replace the paragraph commencing at line 23 with the following amended paragraph:

Referring to Figures 21 and 22, there is illustrated a dehumidification unit Z_{10} formed in accordance with a tenth embodiment of the present invention. ~~The dehumidification unit Z_{10} is a result of the embodying of inventions as set forth in claim 1 and claim 3.~~ The dehumidification unit Z_{10} is configured basically the same as the dehumidification unit Z_1 of the first embodiment, with the exception of the way the cooling element 2 is constructed.

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Replace the paragraph commencing at line 6 with the following amended paragraph:

Referring to Figure 23, there is illustrated a dehumidification unit Z_{11} formed in accordance with an eleventh embodiment of the present invention. ~~The dehumidification unit Z_{11} is a result of the embodying of inventions as set forth in claim 1, claim 3, and claim 5.~~ The dehumidification unit Z_{11} is configured basically the same as the dehumidification unit Z_{10} of the tenth embodiment, with the exception that they differ from each other partially in the configuration of the cooling element 2.

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Replace the paragraph commencing at line 12 with the following amended paragraph:

In the dehumidification unit Z_{10} of the tenth embodiment, the cooling element 2 is formed from a passage structure body 25 shaped like a thick plate frame in which a large number

of second air ventilation passages 4, 4, ... are arranged in rows and whose planewise central portion is provided with an opening 24. Unlike the dehumidification unit Z_{10} , the cooling element 2 of the dehumidification unit Z_{11} of the present embodiment is formed from a passage structure body 25 which is provided, at its passagewise, approximately central portion within the opening 24, with an intermediate passage member 29 (which corresponds to [""]) air stream regulating means $X[""]$) as set forth in the fifth invention of the present application (claim 1) which is so disposed as to divide the opening 24 into two portions (i.e., a front portion and a rear portion), and the intermediate passage member 29 is provided with intermediate passages 4c, 4c, ... corresponding to the entry and exit portions 4a, 4a, ... and 4b, 4b, ... of the second air ventilation passages 4, 4,

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Replace the paragraph commencing at line 19 with the following amended paragraph:

Referring to Figure 24, there is illustrated a dehumidification unit Z_{12} formed in accordance with a twelfth embodiment of the present invention. ~~The dehumidification unit Z_{12} is a result of the embodying of inventions as set forth in claim 1, claim 3, and claim 5.~~ In the dehumidification unit Z_{11} according to the eleventh embodiment, it is arranged such that the intermediate passage member 29 is disposed in a passagewise intermediate area of the opening 24 so as to traverse it, and the cooling air (Ab) flowing in the side of the opening 24 is flow-rectified midway relative to the flow direction by the intermediate passage member 29, thereby to inhibit the flow deviating of the cooling air (Ab) in the inside of the opening 24. Unlike the dehumidification unit Z_{11} , in the dehumidification unit Z_{12} of the present embodiment a partition wall member 30 (which corresponds to "air stream regulating means X") is so disposed as to divide the opening 24 side to side into two portions, i.e., a right side portion and a left side portion, whereby the flow of the cooling air (Ab) flowing into the opening 24 is split right and left. Consequently, this accomplishes not only improvement in the heat-liberation efficiency of heat of adsorption by the cooling air (Ab) in the area of the opening 24 but also further improvement in the dehumidification capability of the dehumidification unit Z_{12} .

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Replace the paragraph commencing at line 16 with the following amended paragraph:

Referring to Figure 25, there is illustrated a dehumidification unit Z_{13} formed in accordance with a thirteenth embodiment of the present invention. ~~The dehumidification unit Z_{13} is a result of the embodying of inventions as set forth in claim 1, claim 3, and claim 5, and~~ The dehumidification unit Z_{13} has a configuration as a result of a combination of the dehumidification unit Z_{11} of the eleventh embodiment and the dehumidification unit Z_{12} of the twelfth embodiment.

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Replace the paragraph commencing at line 17 with the following amended paragraph:

Referring to Figure 26, there is illustrated a dehumidification unit Z_{14} formed in accordance with a fourteenth embodiment of the present invention. The dehumidification unit Z_{14} is a result of the embodying of inventions as set forth in claim 1, claim 3, claim 6, and claim 7, and is a developed example of the dehumidification unit Z_{10} of the tenth embodiment.

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Replace the paragraph commencing at line 22 with the following amended paragraph:

More specifically, in the dehumidification unit Z_{10} of the tenth embodiment, the opening 24 which is defined in a planwise central portion of the cooling element 2 is shaped like a rectangle corresponding to its outer shape (in other words all the entry portions 4a, 4a, ... situated on one end side of the opening 24 have the same length). Unlike the dehumidification unit Z_{10} of the tenth embodiment, in the dehumidification unit Z_{14} of the present embodiment the opening 24 is not shaped like a rectangle but is formed into an approximately trapezoidal shape so that one side of the trapezoid on the side of the entry portions 4a, 4a, ... slopes so as to deviate outwardly from the upstream side towards the downstream side relative to the passage direction of the first air ventilation passages 3, 3, ... of the adsorption element 1. To sum up, the shape of the opening 24 is set such that the passage length of the entry portions 4a, 4a, ... situated on one end side of the opening 24 becomes gradually shorter with approach towards the downstream side from the upstream side of the first air ventilation passages 3, 3, ... (stated another way, the passage length becomes shorter the nearer to the downstream side of the first air ventilation passages 3, 3, ...). In the present embodiment, the entry portions 4a, 4a, ... having different passage lengths together constitute a "flow rate regulating means Y" as set forth in the ~~claims~~sixth invention of the present application.

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Replace the paragraph commencing at line 8 with the following amended paragraph:

Referring to Figure 27, there is illustrated a dehumidification unit Z_{15} formed in accordance with a fifteenth embodiment of the present invention. ~~The dehumidification unit Z_{15} is a result of the embodying of inventions as set forth in claim 8, claim 9, claim 10, and claim 17.~~ Like each of the dehumidification units Z_1 - Z_{14} of the above-described embodiments, the dehumidification unit Z_{15} of the present embodiment is formed by sequentially alternately laminating a plurality of adsorption elements 1, 1, ... each provided with a large number of first air ventilation passages 3, 3, ... and a plurality of cooling elements 2, 2, ... each provided with a large number of second air ventilation passages 4, 4, ... in a 90-degree plane phase so that the first air ventilation passages 3, 3, ... are orthogonal to the second air ventilation passages 4, 4, ... when viewed from above. The dehumidification unit Z_{15} of the present embodiment is such an integrally laminated structure.

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Replace the paragraph commencing at line 18 with the following amended paragraph:

Referring to Figure 28, there is illustrated a dehumidification unit Z_{16} formed in accordance with a sixteenth embodiment of the present invention. The dehumidification unit Z_{16} is a result of the embodying of inventions as set forth in claim 8, claim 9, claim 11, and claim 17 and is regarded as a modification example of the dehumidification unit Z_{15} of the fifteenth embodiment.

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Replace the paragraph commencing at line 2 with the following amended paragraph:

Referring to Figure 29, there is illustrated a dehumidification unit Z_{17} formed in accordance with a seventeenth embodiment of the present invention. The dehumidification unit Z_{17} is a result of the embodying of inventions as set forth in claim 8, claim 9, claim 12, and claim 17 and is regarded as a modification example of the dehumidification unit Z_{16} of the sixteenth embodiment.

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Replace the paragraph commencing at line 2 with the following amended paragraph:

Referring to Figure 30, there is illustrated a dehumidification unit Z_{18} formed in accordance with an eighteenth embodiment of the present invention. The dehumidification unit Z_{18} is a result of the embodying of inventions as set forth in claim 8, claim 9, claim 12, and claim 17. Like the dehumidification unit Z_{17} of the seventeenth embodiment, the dehumidification unit Z_{18} is regarded as a modification example of the dehumidification unit Z_{16} of the sixteenth embodiment.

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Replace the paragraph commencing at line 2 with the following amended paragraph:

Referring to Figure 31, there is illustrated a dehumidification unit Z_{19} formed in accordance with a nineteenth embodiment of the present invention. The dehumidification unit Z_{19} is a result of the embodying of inventions as set forth in claim 15 and claim 17. Like each of the dehumidification units Z_{15} - Z_{18} of the fifteenth to eighteenth embodiments, the dehumidification unit Z_{19} is characterized by the construction of the cooling element 2.

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Replace the paragraph commencing at line 24 with the following amended paragraph:

Referring to Figure 32, there is illustrated a dehumidification unit Z_{20} formed in accordance with a twentieth embodiment of the present invention. The dehumidification unit Z_{20}

is a result of the embodying of inventions as set forth in claim 8, claim 13, and claim 17. The dehumidification unit Z_{20} is a modification example of the dehumidification unit Z_{19} according to the nineteenth embodiment.

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Replace the paragraph commencing at line 2 with the following amended paragraph:

Referring to Figure 33, there is illustrated a dehumidification unit Z_{21} formed in accordance with a twenty-first embodiment of the present invention. ~~The dehumidification unit Z_{21} is a result of the embodying of inventions as set forth in claim 8, claim 9, claim 10, claim 16, and claim 17.~~ The dehumidification unit Z_{21} has a construction formed by a combination of the construction of the cooling element 2 of the dehumidification unit Z_{15} of the fifteenth embodiment and the construction of the cooling element 2 of the dehumidification unit Z_{19} of the nineteenth embodiment. Therefore, the dehumidification unit Z_{21} has both the characteristics of the cooling element 2 of the dehumidification unit Z_{15} and the characteristics of the cooling element 2 of the dehumidification unit Z_{19} .

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Replace the paragraph commencing at line 12 with the following amended paragraph:

Referring finally to Figure 34, there is illustrated a dehumidification unit Z_{22} formed in accordance with a twenty-second embodiment of the present invention. ~~The dehumidification unit Z_{22} is a result of the embodying of inventions as set forth in claim 8, claim 9, claim 10, claim 14, and claim 17.~~ The dehumidification unit Z_{22} has a construction as a result of a combination of the construction of the cooling element 2 of the dehumidification unit Z_{15} of the fifteenth embodiment and the construction of the cooling element 2 of the dehumidification unit Z_{20} according to the twentieth embodiment. Therefore, the dehumidification unit Z_{22} has both the characteristics of the cooling element 2 of the dehumidification unit Z_{15} and the characteristics of the cooling element 2 of the dehumidification unit Z_{20} .